How to Evaluate Educational Games With Refugee Children: Methodological Aspects and Lessons Learned From EduApp4syria

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Abstract: Educational game evaluation is a multidimensional and complex phenomenon. The growing interest in game-based learning (GBL) results in an increasing need to evaluate the effects of this approach, which requires appropriate methods, techniques, and principles that can be applied by the GBL community. This paper reflects on the methodological aspects of evaluating educational games with refugee children drawing on practical experience and evaluation studies conducted in the EduApp4Syria project. The paper gives an overview of the project and presents three field studies conducted, including the GBL evaluation methods used in the context of refugee children. The methods used included quasi-experimental design, mixed-method approach, observation with/without checklist, questionnaires, interviews, pre/post-test (using EGRA), screen recording, game-logs, and expert evaluation. The evaluations illustrate the application and assessment of these methods. This paper presents the findings and pitfalls related to the applicability of evaluation methods in various phases of the game development life cycle and methodological and practical challenges in conducting research and eliciting data in the context of evaluating educational games with refugee children. This article provides an up-to-date examination of both methodological challenges common to GBL evaluation and those unique to the user group of refugee children, culminating in guidance for researchers on methods and critical issues that need to be considered when designing research studies involving educational games and children. The paper assists researchers to critically reflect on these methodological issues and methods they use as they will have implications on the data obtained.

Keywords: game-based learning, language-learning games, evaluation methods, methodological aspects, children, refugee children

1. Introduction

Digital games have become the native language of children growing up in this technological era (Prensky and Berry, 2001). They learn to talk by playing with the sounds, they even learn strategic thinking and collaboration by playing games, making it one of the most natural forms of learning (Sung and Hwang, 2013). Several researchers have identified the potential of games for generating possible positive impact for learning on the digital generation (Connolly et al., 2012, Kinzie and Joseph, 2008, Prensky and Berry, 2001). Prensky, (2003) emphasized that integrating games with educational goals not only trigger motivation but also provide new interactive learning opportunities for children. However, the use of games to teach educational content brings into question their compatibility with learning which has prompted many researchers to investigate the actual benefits of games for learning (Erhel and Jamet, 2013). To assess the effectiveness of games for learning, evaluations are necessary, and the GBL approach requires a multidimensional evaluation that requires appropriate methods, techniques, and principles that can be applied by the GBL community (Tahir and Wang, 2017, Connolly et al., 2012).

The studies on the effectiveness of educational games encountered a series of methodological issues and awareness of these challenges is essential to bring research to a higher level (Vanderhoven et al., 2015). Furthermore, research with refugee children raises several additional practical, ethical, and methodological issues such as consent, access, privacy, and confidentiality. Although these are not unique to refugee children, they do present researchers with specific dilemmas to cater differences in research with refugee children that must take additional issues into account such as language barrier, culture, war traumas, mental health issues, separation, and socio-economic conditions due to relocation of this population considering their extraordinary experiences (Tahir, 2019). The increased number of refugee populations has led to the interest of research and a need for understanding and new knowledge of this particular group (Out, 2016). A child-centered approach to data collection views children as subjects rather than objects of research in order to address this difficulty (Mauthner, 1997). There exist guidelines and methods on child-computer interaction (CCI) research, but very little focus has been explicitly given to refugee children with a challenging background. The review (Tahir, 2019)

highlighted the gap in the literature regarding methodological guidelines uncovering issues in research with refugee children and the effectiveness of different research methods for researching with this user group.

Hill Malcolm (Hill, 1997) argues that it is crucial that research-based publications should provide details of the employed methods and also give assessments and feedback regarding how satisfactory particular techniques are (Fargas-Malet et al., 2010). This research paper addresses this argument by presenting details of methodological underlining for evaluating learning games with refugee children based on experiences from the EduApp4Syria research project. Several evaluation studies were carried out throughout this project, and this paper points out certain pitfalls and reflects on methodological aspects along with any practical and ethical considerations of evaluating educational games with refugee children. Based on the lessons learned, several factors need to be taken into account when devising an appropriate methodology for researching with refugee children to ensure that a good understanding of users is included in the resultant introduced technology.

2. Background

This section presents the background and main goals of the project EduApp4Syria, evaluation conducted in each phase of this project and the overview of the field studies describing the main focus, participants, setup and methods used.

2.1 Research project (EduApp4Syria)

The EduApp4Syria project is an international innovation competition where the aim is to help Syrian children learn how to read Arabic and improve their psychosocial wellbeing through game-based learning apps on smartphones (Nordhaug, 2016). The motivation for the project is that 2.25 million Syrian children are out of school both within Syria and in other countries because of the conflict. Many Syrian children who attend school face difficulties in learning, because they have endured long-term stress or because they are being taught in a language they do not master. There is a risk that a whole generation grows up that cannot read or write in their mother tongue. The EduApp4Syria competition is funded by the Norwegian government and coordinated by the Norwegian Agency for Development Cooperation (Norad) in cooperation with Norwegian University of Science and Technology, All Children Reading, USAID, World Vision, the Australian Department of Foreign Affairs and Trade, Orange, INEE and UNICEF Ventures.

2.2 Evaluation in each phase of the project

The EduApp4Syria project is organized as a multi-stage innovation competition over three phases, as shown in Figure 1. Before the competition launched on January 1st, 2016, a field study was conducted among Syrian refugees in Istanbul and Gaziantep in Turkey. The goal of this field study was to check the status quo on game-based learning apps for Syrian children, to elicit user requirements for the apps and to understand the situation and context of Syrian refugees. Before the launch of the competition, a jury of experts with experts within literacy, psychosociology, game-based learning, e-learning, intellectual property (IP), Arabic language, and Syrian culture was established. The jury was selected based on their credentials and their experience with similar projects. To establish a common understanding of the project and its aims, the jury was introduced to the problem and theories on GBL. A provided checklist and evaluation form, based on theories of intrinsic motivation, cultural and language suitability, and technical requirements, were used by the jury to select games for the next phases. After the three phases of submission and evaluations, two winning games were selected: Feed The Monster, which is a game where the player feeds monsters letters, words and sentences, and Antura and the Letters, which is a collection of mini-games playing with alive and animated letters and the shepherd dog Antura.

2.3 Overview of the three field studies in the project

This section provides an overview of the three field studies carried out in the EduApp4Syria project conducted at different phases of the project, where the main focus was to investigate the effectiveness of GBL approaches for refugee children based on usability, learning, engagement, game elements and technical and user requirements.

2.3.1 Field study one: User test in Trondheim, Norway, August 9th and 10th, 2016

The goal of this user test was to evaluate the enjoyment, appearance, audio and perceived learning for five learning games from phase one (see Figure 1) and pick the three best ones to be funded for the next phase. The user test was organized through the qualification program for immigrants in Trondheim municipality, and 50 Syrian children were recruited for the test. The user tests were organized over two days in five sessions, where ten children participated in each session. In each session, a pair of children would play through five games. They would play one game for 12 minutes; then answer a questionnaire and be asked about the game for 3 minutes before they would continue with the next game. After playing through all five games, the pair of children would be asked to rate all five games and be interviewed about their experiences with the games. For each session, five pairs of children were organized at five tables where the observer and if required, an interpreter would sit. Many of the children were fluent in Norwegian and did not need an interpreter. The evaluation team consisted of the head of the jury (GBL and technical expert), the Syrian language and cultural expert of the jury, and three Norad-employees. The head of the jury introduced the team to the evaluation and explained the evaluation process and tools. The observer's responsibility was to aid the children in starting the game, observe when they were playing and interview the children. Each group in a session started with a different game, to account for the perception of games due to the order they were played. Each table had one smartphone running the games, which meant that one child would play while the other watched. The observer asked the children to change on who was playing. The questionnaires used for each game had four questions. Parts of the forms are shown in Figure 2**.** The observers were also asked to observe the children, and some children were video recorded. The jury ended up picking the two games the children ranked as best, and one of two games the children ranked as number three and four with similar scores.

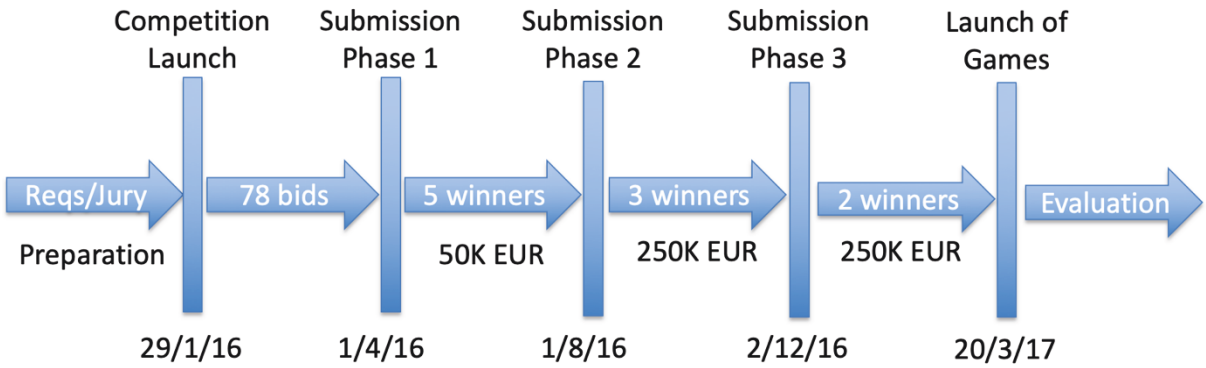

Figure 1: Overview of the EduApp4Syria multi-stage innovation competition

Figure 2*:* Left: Part of the Per-game evaluation form. Right: Part of the final evaluation form

2.3.2 Field study two: User test in Amman, Jordan, December 8th, 2016

In the second user test, three learning games were evaluated in one day. Twenty-eight children and parents were invited to four sessions, where seven children and their parents participated in each session. Each session had seven tables where one child could play all three games. Every child was asked to play each game for 25 minutes, then have a 5-minute break, before playing the next game until all three games had been played. For this user test, the sequence of which games to be played changed for each session. No questionnaires or forms were used for the children for this test, only observation. The observers were allowed to help the children after

some time if the children got stuck or if the app crashed. The focus of the user test was to assess the usability and engagement of the games, and more specifically to investigate whether the games were appropriate for the target audience, if the game interfaces were fun and engaging, if the games were easy enough to use and understand, if the games held the user's concentration over a period of time, if the game matched the users' literacy skills, if the game rewarded the user appropriately, if the user had a sense of control of the game, if the user understood the goal of the game, if the feedback was appropriate, and if the user got emotionally involved and immersed. The observers were asked to look for positive and negative responses in forms of facial expressions, body language, laughter, celebrations, shout-outs, focus, play without help, concentration, engagement, frustration, anger, boredom, lost focus or interest, need for help, giving up, and stop playing the game. The observers were given an observation form, guidelines for filling out the observation forms, and an example observation form. Between games, the children were interviewed about their experiences. The parents of the children were also asked to play the games and were afterward interviewed about whether they thought the games were appropriate and useful for the children, and if they would let their children continue to play such games.

2.3.3 Field study three: User test in Trondheim, Norway, April 7th to May 6th, 2018

In the third user study, the final released version of one of the two winner games (Feed the Monster) was evaluated with migrant refugee children for one month. The focus of this user test was on learning gain, game factors that generate affective cognitive reactions, engagement, enjoyment, usability, and user characteristics that influence these factors. A quasi-experiment design was used for this study with a sample size of 30 children between 5 to 10 years old who could speak but could not read or write Arabic. Data collection enabled appropriate methods to be tested and combined; which included a demographic questionnaire, a VARK questionnaire, a pre/post-test using EGRA, an observation using a checklist, game logs, screen recordings, usability tasks, follow-up interviews, and a follow-up questionnaire. The user test was organized through the weekend Arabic class program for children in the Muslim Society in Trondheim (MST) which is a non-profit, religious and cultural organization that aims to serve the interests of the Muslim community in Norway. The children and their parents were contacted with the help of two teachers of the weekend class program, and a total of 30 Syrian children were recruited for the user study. The user tests were organized over one month in nine sessions, where 3-5 children participated in each session. The sessions took place twice a week, on Saturday and Sunday. The experiment was designed to be one week long and consisted of two parts: a playtest session and 1-week play at home. The playtest session started with a pre-test (based on EGRA), followed by the game play session and a short follow-up interview at the end. After this session, parents were handed mobile devices with the game installed to let children play the game at home daily for at least 20 minutes for one week. Many of the parents were not fluent in English, and an interpreter was required who could speak both Arabic and English. A translator and three to four observers/evaluators (2 experts in GBL and 2 novice) participated in each session. The observers were given an observation checklist, guidelines for filling out the observation forms, and an example observation form. The session had several tables where one child would sit with one observer to play the game. Every child was asked to play the game for 20-25 minutes, then have a 5-10-minute short follow-up interview.

3. Lessons learned

This section presents the results in terms of the lessons learned and the experience of research with refugee children obtained from the project EduApp4syira. The findings are categorized according to two research questions:

- *RQ1*. What is the applicability of evaluation methods in different phases of educational game design and development for refugee children?
- *RQ2*. What are the issues in methodology and practical and ethical challenges in conducting research and eliciting data when evaluating educational games with refugee children?

3.1 Applicability of methods in various phases of the game development life cycle (RQ1)

During the various phases of educational game development, there is a set of evaluation methods that can be applied. Table 1 presents an overview of different evaluation methods and their applicability in various phases in educational games design and development for refugee children based on the experience from the EduApp4Syria project (also applicable for other user groups). The *Concept phase* of the project focused on constructs such as project plan, learning components embedded in the game, expected effect on psychosocial

wellbeing, and user requirements. The *Pre-Production* focused on constructs such as enjoyment, appearance, audio, perceived learning, *Production* focused on usability and engagement, and *Post-Production* focused on learning gain, game factors that generate affective cognitive reactions, engagement, enjoyment, usability and user characteristics that influence these factors.

Expert evaluations are more feasible in the early phases of development as educational games require a multi-disciplinary approach from the early concept to ripe all the benefits. Whereas, methods such as observation, experiments, game logs, pre/post-test, screen recordings are particularly useful in later phases, providing an opportunity for impact evaluation with user data. The game logs can be useful for monitoring long term engagement and learning, especially for playing in a real context. Methods such as interviews, questionnaires, and user testing can be employed in multiple phases with slight variations in details. Observations without a checklist are beneficial in the earlier phases of development when the objective is more exploratory, and it helps uncover problems and provide insights into the children's experiences. In later phases, it is more effective to adopt observation with a checklist to be more focused and concrete. Interviews with children should be kept short, it is useful also to conduct interviews with parents to get useful insights about childrens' game usage and this also increases parents' confidence in learning games. Questionnaires are not very effective concerning data obtained from children. However, it is useful to obtain children demographics and learning preferences data from parents. User testing is particularly useful to discover bugs in the production phase and also later to test usability and engagement. Based on our experience from this project, it is recommended to use a multi-method approach when researching with children. Different methods provide a different level of details and insights, and it is often useful to combine qualitative and quantitative data as children of this age often say things to please adults, others are shy and there is a considerable variation in what games the children think are most fun and which games they actually want to play more.

Table 1: Educational game development phases and applicability of methods

Evaluation Methods	Concept (Phase 1)	Pre-Production (Phase 2)	Production (Phase 3)	Post-Production (Launch of game)
Expert evaluation using checklist criteria	X	X	X	
User Testing		X	X	X
Interview		X	X	X
Observation without checklist		X		
Observation with checklist			X	X
Questionnaire		X		X
Pre/Post Test				X
Screen/Video Recording		X	X	X
Game logs				X
Quasi-experiment				X

3.2 Methodological, practical and ethical issues (RQ2)

This section focuses upon methodological challenges and practical and ethical considerations identified in research with refugee children.

3.2.1 Consent, gaining access and privacy

When researching with refugee children, consent for accessing children needs additional details as children and parents are commonly reached through trusted NGOs, religious societies, or qualification programs for immigrants. Researchers need to provide a thorough explanation of the research study to their collaborative partners to gain their trust before obtaining informed consent from children and parents or caretakers. In EduApp4Syria, children were accessed through Trondheim municipality, the Al Arj association, and the Muslim Society in Trondheim (MST) respectively in the three studies. It is also essential to ask for children's consent to participate (verbally) after getting a consent form signed from parents. In the third user test, some children were not willing to participate in the study, although their parents had signed the consent form.

Another constraint is to find suitable timeslots for participants. In the third user test, the study had to be conducted on weekends during the time for classes in the mosque and had to be adjusted according to the participants' particular needs. Furthermore, it was also essential to find a suitable room that would not be in conflict with other activities and provide sufficient privacy without interruptions. This can be a sensitive issue as initially, the members and leaders of the host community do not have trust, and they want to observe your study

to understand your objective and research. In the third user test, during the first session, the administrator of weekend classes monitored the study. However, once she was familiar with the process, they facilitated privacy.

3.2.2 Language barrier and technology experiences

The language and technology experiences of the refugee children participating in the study can have a significant effect on the results. Most of the children in the first user test knew how to read in Norwegian and were experienced at playing games on smartphones, which made it easier for them to play the games in the test. However, in the second user test in Amman, most of the children could not read in any language before the test and had little or no experience using a smartphone. This caused some initial problems as the children did not know how to do gestures such as drag-and-drop and did not know typical user conventions used in most smartphone games. However, the limited exposure to smartphones and smartphone games was found to be very useful for testing the usability of the games. In games with lousy user design, limited user feedback, unclear goals, and progression, many users got stuck and needed help. The test showed very clearly the games which had good user design and who did not. In the third user test, most of the children knew how to read in Norwegian and were experienced at playing games on smartphones. Most of the children could speak two languages, either Arabic and Norwegian or Arabic and English with a few exceptions who could only speak in Arabic. However, it was found that some children knew a different dialect of Arabic and were unable to understand the game audio. Most of the children had access to video games, mobile technology, and digital gadgets at home. It was observed that children who had multiple options and with greater exposure to the digital world were more challenging to engage with the game for a longer period.

3.2.3 Learner-related

The target population may vary concerning demographics, cognitive and psychological factors (such as age, gender, verbalization, previous knowledge, attention span, learning disabilities etc.) which should be taken into account when devising methodology based on the type of data required. The user characteristics might influence the produced results, as children have different experiences of learning and playing with educational games. The first user test showed some significant differences in the children demeanor, where some were open and vocal, while others were quieter and shyer. This could have been caused by the variation of how long the refugees had been in Norway. Some families had lived in Norway for over two years, where one family only one week. The choice of research method should take this into consideration.

During the second user test, it was found that younger children and those who did not know any Arabic letters preferred Feed the Monster, while older children with some familiarly to the Arabic letters preferred Antura and the Letters. The first game was easier to play but could be a bit repetitive, especially with previous reading experience. The second game was a bit harder to play but provided more variation. A similar trend was noticed in the third user test, where younger children were more engaged in Feed the Monster than older ones.

Children are also different in terms of their personalities and preferences. Some were more into physical activities, and it was difficult for them to sit for 20 minutes. They started jumping and playing around as soon as the session was over. Game session time should be shorter than 20 minutes for more physically active children. Another critical factor is the attention span of children in general and children with learning disabilities. Some refugee children had learning difficulties, and although their learning gain was not satisfactory; they spent more time playing the game even after the game session was over as compared to others.

Gender differences also affect the engagement of children with educational games to some extent, where girls and boys had different preferences of game genre and characters. However, the two winner games (Antura and Feed The Monster) engage both genders.

3.2.4 Environment and setup

The context and setup of field studies play an important role in evaluation and research. The setup can sometimes be challenging to manage based on factors such as gaining access and privacy discussed earlier. In the first user test, all the children played in the same room. This gave some challenges as these games require the players to hear the audio properly to be able to play the game (e.g., what letter or word being said). Even though the children were spread out in the room, it was sometimes hard to hear the sounds from their own game. One solution would be to provide headsets for the children, but this was impractical as they were playing

in pairs. Also, we wanted to test the games in a realistic environment, and most children play smartphone games without headphones. Using headphones would also make it harder to study the dynamics between the pair of children and would have made the observations harder to do (see Figure 3 from the first user test).

The third user test took place within the mosque area, and we were given two rooms for most of the sessions. Only two or sometimes three children would have parallel sessions in one room, and the rest of the children who were not playing were in a separate room. There were not many issues regarding hearing audio this time, as the room was big, the children were spread out, some children were pre-tested while others played the game. However, there were still some challenges. Children who were playing the game were distracted when other children whose session had not started yet began to play with each other and jumping around in the other room, and vice versa children outside wanted to start playing the game soon. Also, children would get distracted and started looking around when it was noisy, mostly when people coming and leaving the room. The organizers from the mosque were frequently coming in during the first days to monitor research.

Figure 3: Pictures from the user test in Trondheim, Norway

3.2.5 Parents involvement

The presence of parents provides positive effects when researching with refugee children as they become more comfortable and responsive. We noticed that for younger children (mostly five), it was essential to have their mother around and help communicate with them. Some children would not play or respond when asked by the observer, but when their mother asked the same thing, they would reply to her in detail. One girl stopped playing in between and ran looking for her mother, but when she came and sat with her, the girl started playing again. For user study in Amman, most of the children came with their mothers or their grandmothers, which gave a very positive side-effect. As the mothers and grandmothers were invited to play the games, it was revealed that several of them did not know how to read Arabic either. Some of them learned their first letters from the game, and became very enthusiastic, and wanted to learn by playing the games together with their children.

3.2.6 Cultural issues

Some cultural issues were also noticed during the field studies. During the third user test, one boy did not want to talk to the female evaluator and only responded when a male evaluator came. Then he agreed to play the game and was comfortable. The family had recently come to Norway. One interesting observation from study one was that almost all the children came with their father and not their mother. However, in user test in Amman most came with their mothers. Based on experience during the three evaluations, the immigrant children who are born and raised in Norway were different concerning cultural and economic aspects than refugee children in countries like Jordan. Children are influenced by the country they have immigrated to. Children in Amman, Jordan were more obedient and interested in technology as they were less exposed to it. Whereas children in Norway were less engaged by technology because of their previous exposure and they also had a strong opinion when they wanted to stop, not play or answer a question. However, in Amman, the children to a larger degree completed the session.

3.2.7 Translator

It is essential to recognize the need for a translator when researching with refugee children. In field study three, most of the parents did not know Norwegian or English, and the researcher running the experiment could only communicate in English. Therefore, a translator was needed for communication. There were three or four

evaluators during each session who could speak one or two of the three languages (Arabic, English, Norwegian), and for a few children, a translator was required. Parents required the help of the translator to understand the process and documents they had to fill. The documents were translated into three different languages. However, it is sometimes difficult to work with a translator and other evaluators if they do not focus on the instruments or do not understand the research objective completely. In our case, some evaluators helped the children with the language pre-test by giving hints, which made the results invalid. It is vital to give the evaluators specific instructions for conducting the task following the research objectives.

3.2.8 Child-Friendly interactions

The interaction between the researcher or evaluator and children is a delicate process. It is crucial to establish a tone of informality with children in order to make them comfortable and create space for them to express themselves clearly. Is it essential to maintain a balance between asking too few and too many questions. During the third field study, it was noticed that when evaluators were not talking at all with children and only concentrating on observing them, children were a bit nervous during the session. This might be because they gave a pre-test before, so they felt they were also being tested on the game as well. Children in the second session were less nervous because evaluators talked and interacted with them. Asking questions within the gameplay (e.g., do you know what happened when the monster threw the letter) proved very helpful and gave additional insights to children's understanding rather than just relying on observations. However, it is also crucial not to break the tempo of children playing the game. Asking questions when they are less engaged makes them active again. To conclude, it is essential to talk to children and create a friendly atmosphere.

3.2.9 Effect of Information provided

Care needs to be taken to present the research purpose and objective to the parents and children. The difficulty of describing the purpose of research to children remains an important issue that needs special attention. If a researcher or translator convey wrong information or incomplete information, it negatively affects the results and research process. To avoid this problem, it is essential that translators or evaluators (other than the researcher) involved in a research study have a clear understanding of the research objective. In the third user test, some children knew they were getting the mobile for home as the translator gave this information to the parents. Therefore, they were more excited about taking the mobile and playing the game at home rather than during the game session. During one of the sessions in the third user test, the pre-test and gameplay were started before the translator had entirely explained the research purpose to the parents and before they started filling the forms. As a result, parents were unaware of the research agenda and were trying to help children to get a good score. Maybe they had the impression that the children will get the mobile and gift prize if they do good in the pre-test. However, after the translator explained the research, parents had a clear understanding of everything and did not try to help their child even if they were asked by the researcher to assist in conducting pre-test because the child needed their presence. Therefore, it is imperative that the researcher or translator clearly explain the research purpose to parents or caretakers before the session start and take them to a separated place if their presence is not required. It is also crucial that the researcher and translator have the same understanding of the research study so that the translator conveys the exact meaning to the participants.

4. Conclusion

Research with refugee children in child-computer interaction remains at an exploratory stage. This paper reflects on the methodological and practical aspects of evaluating educational games with refugee children based on pragmatic experience and reflections made during evaluation studies conducted in the EduApp4Syria project. We put forth the findings and a few pitfalls that need to be taken into account when evaluating educational games with refugee children. However, most of these findings can be useful for general research with children as well.

From our experience, a successful evaluation of learning game starts with the selection of a set of factors or dimensions based on the evaluation objective. There is not just one construct, but the complete game-based learning experience is made up of several dimensions that influence each other. Therefore, different methods might be beneficial for different objectives and at different stages of the development lifecycle. The paper identifies the applicability of various methods for different phases of development as well as highlighting essential constructs. According to experiences from the EduApp4Syria project, when devising an appropriate methodology for evaluation, several factors must be taken into consideration: such as language barrier, learner related issues (verbalization, previous knowledge, personality, technology experiences, attention span, learning

disabilities, age and gender of the children etc.), parents involvement, cultural issues, need for translator, environment and setup of research, child-friendly interactions and the effect of information provided on research participants. In this paper we present the evaluation methods and approaches used in the project (EduApp4Syria) for research with young refugee children and highlight the issues, so new researchers in this field can learn from the experience and find the most appropriate way to apply them, so as to diminish their drawbacks as far as possible and also maximize their benefits. This paper aims to encourage researchers to critically reflect on the methodological and practical issues and the methods they choose to employ since they will have implications for the data produced.

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Hannah Kaihovirta and Minna Rimpilä got the award for best poster during ECGBL 2018 and they continue with a full paper presentation this year.

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